

Advanced Lightweight Grenade Launcher (ALGL)

Program Overview



by: Dennis Lambrecht, ALGL Program Manager, NSWC Crane
Jarl Eirik Straume, Nammo Program Manager
Jeff Gramse, GDAS Program Manager



ALGL Program Structure

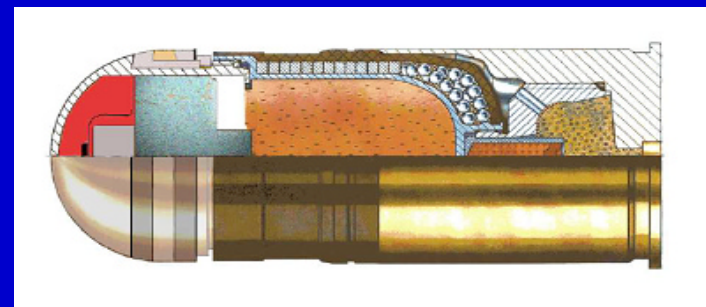


GENERAL DYNAMICS
Armament Systems

GENERAL DYNAMICS
Canada

nammo
NORDIC AMMUNITION COMPANY

ALGL System





ALGL Program Objectives

- United States Special Operations Command:
 - Field an improved 40mm weapon system meeting Special Operations Forces (SOF) requirements
- Marine Corps Warfighting Laboratory:
 - Conduct a Concept Based Experimentation Program
- Foreign Comparative Test (FCT):
 - Type Classify / Type Qualify PPHE for USSOCOM

USSOCOM Key Requirements



- Key Performance Requirements
 - Low System Weight
 - Maximum Effective Range
 - High Probability of Hit
 - Ground and Vehicle Mounted
 - Fire Control Provides Ballistic Solution
 - Enhanced Target Detection and Recognition
 - Uses Standard and Air-Burst Ammunition

MCWL ALGL Experiments



Mobility and Lethality:

- MK47 MOD 0 Machine Gun increased offensive capability
- ALGL fire control capability
- PPHE ammunition capability

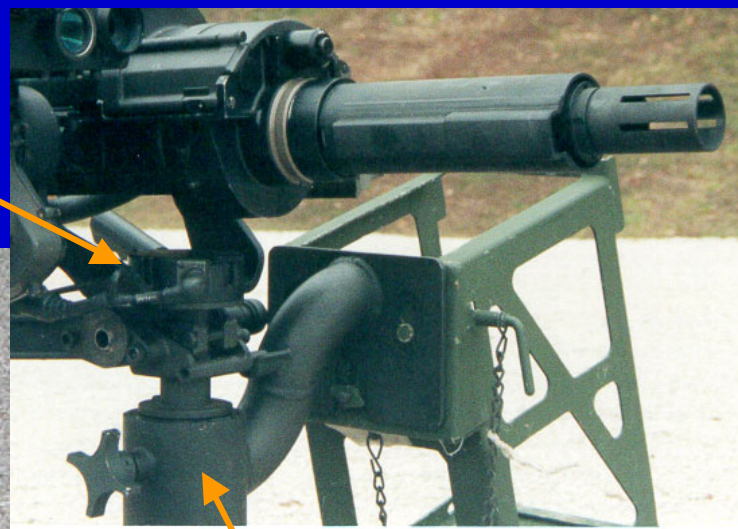


ALGL System Components

MARK 47 MOD 0 Machine Gun

Fire Control

Mount

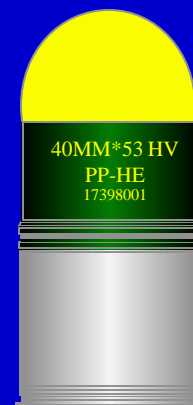


Vehicle Adapter

Ground Tripod

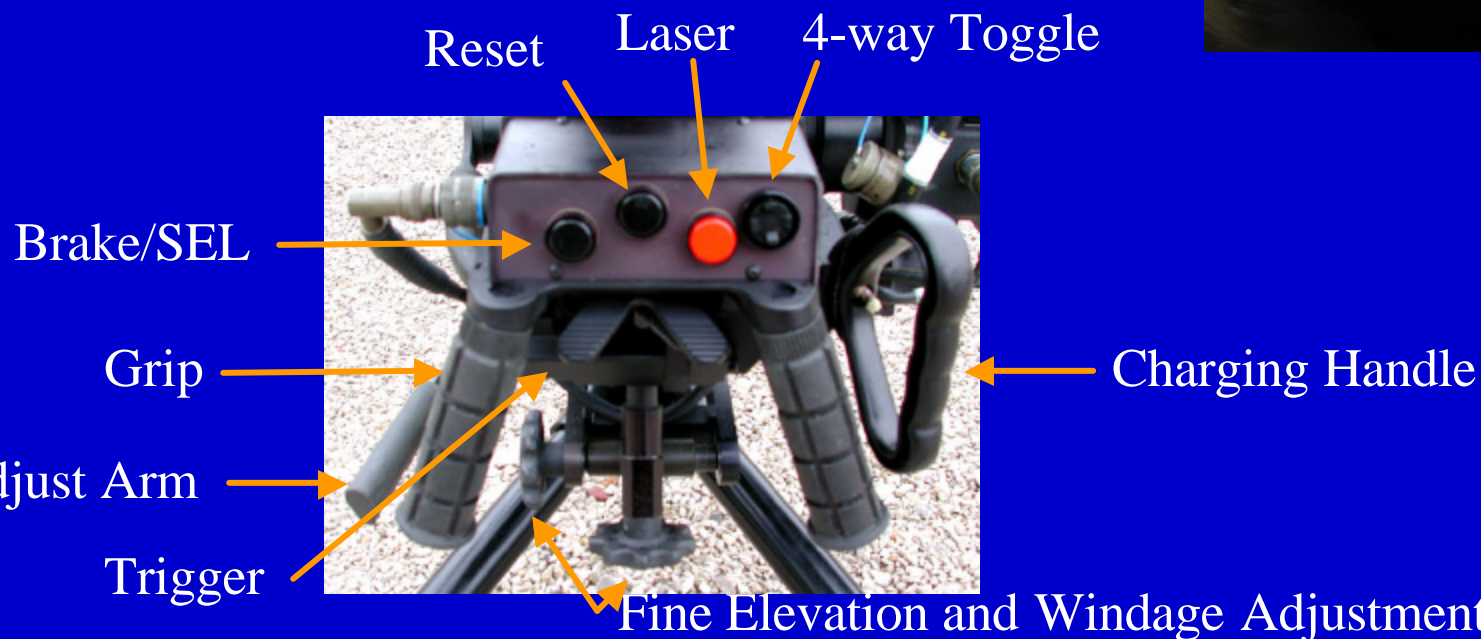
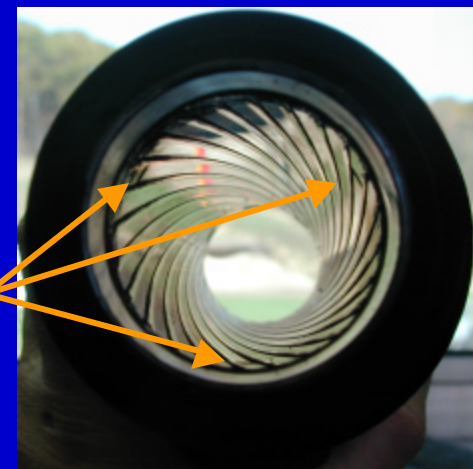
PPHE Air-burst
Ammunition

Standard Ammunition



MK47 MOD 0 Machine Gun

- Ergonomic Improvements
- Contacts in Chamber Set Air-burst Fuze
- Operator Controls



ALGL Fire Control

- Lightweight Video Sight Fire Control

Display

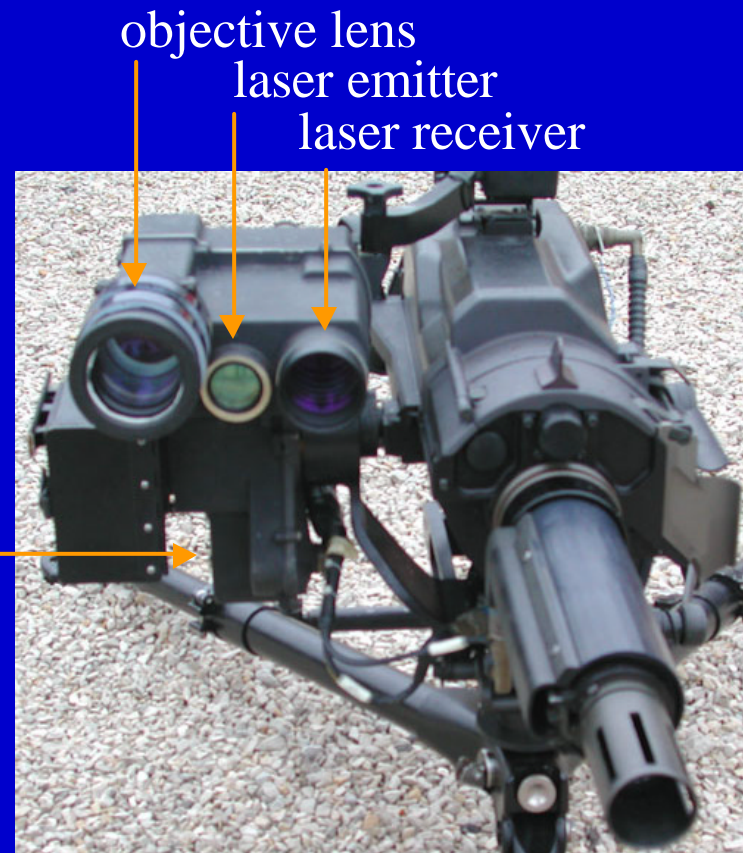
Imaging / Ballistics

Brake/Super-
Elevation



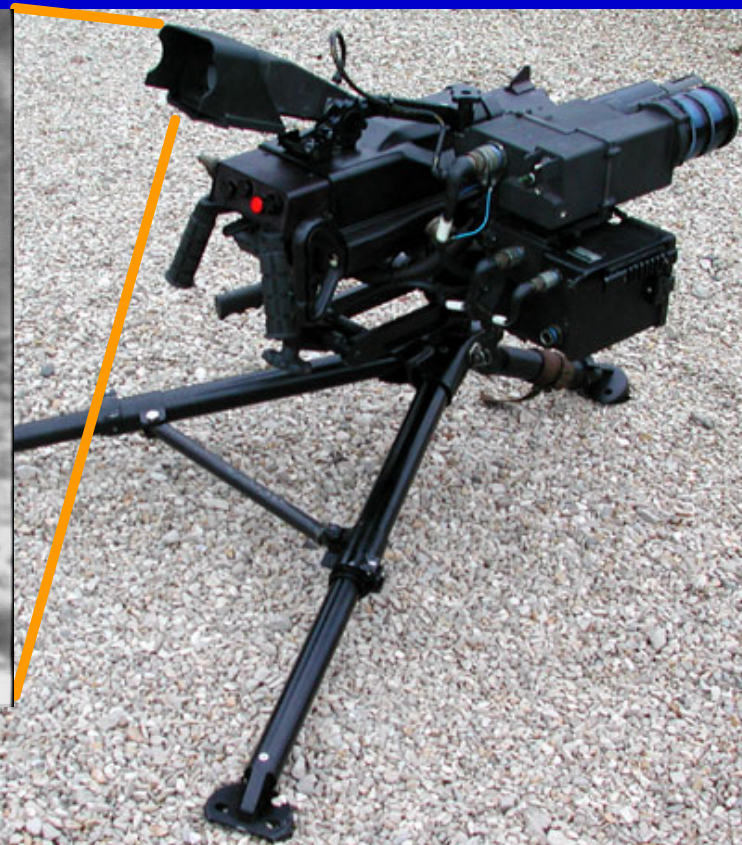
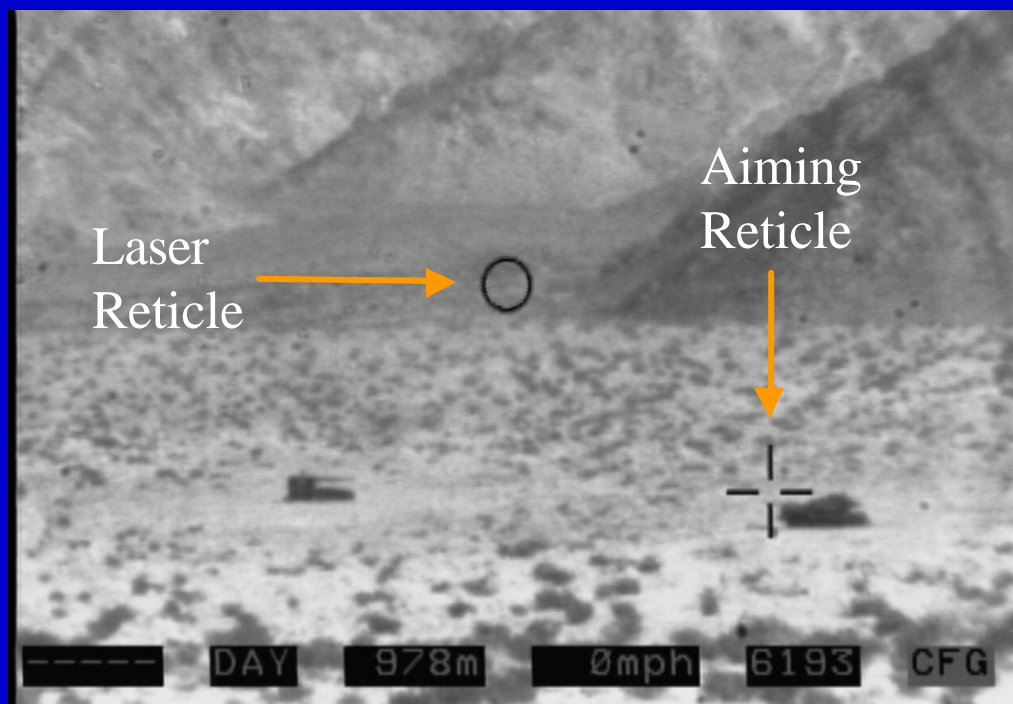
ALGL Fire Control

- Fire Control Imaging/Ballistics
 - Laser Range Finder
 - Video Image Processing
 - Night Vision
 - Ballistic Computer
 - Sets PPHE Air-burst Fuze
- Brake/Super-Elevation
 - Implement Ballistics Solution
 - Locks Weapon and Fire Control Together



ALGL Fire Control

Aiming Reticles for Laser and Weapon



Graphical User Interface
operator adjustments, pre-designated targets, electronic range card

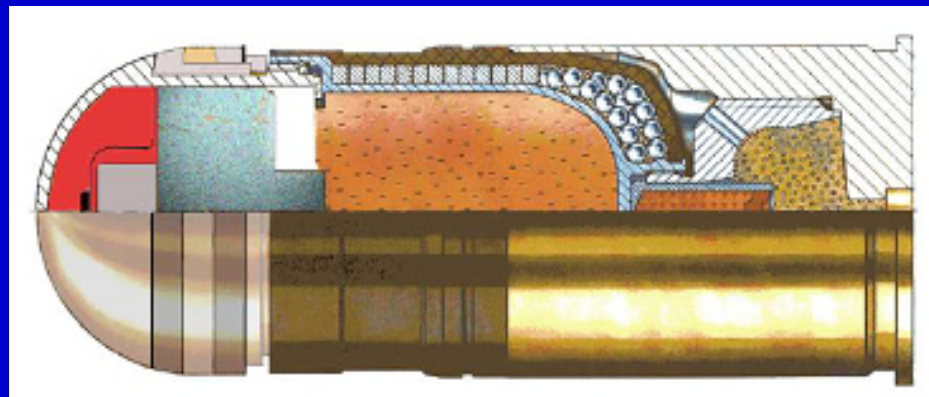
ALGL Mountings

- Mount
 - interface for weapon, fire control
 - quick slew traverse and elevation
- Lightweight Ground Tripod
- Vehicle Adapter Kit

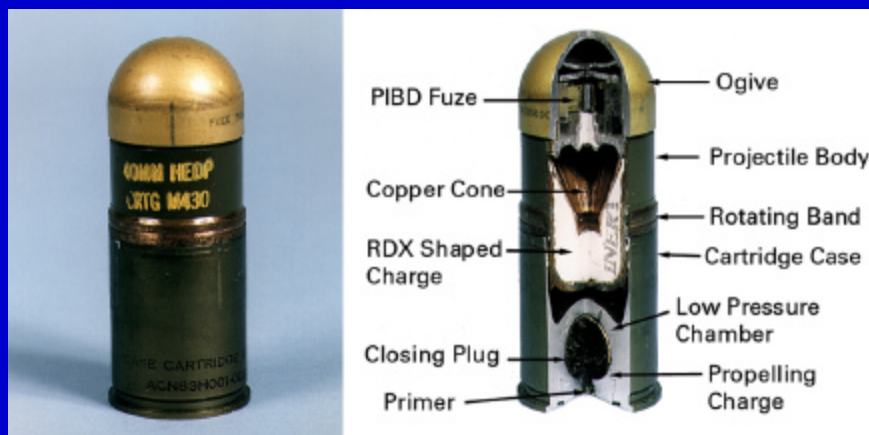


ALGL Ammunition

- PPHE ammunition
 - air burst capability



- Standard 40mm ammunition
 - M430 HEDP
 - M383 HE
 - M918 TP
 - M385 TP



ALGL System

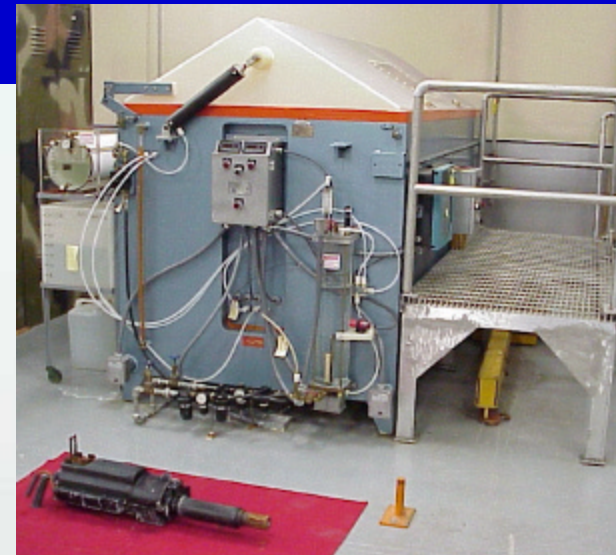




ALGL Schedule

	<u>System</u>	<u>Ammo</u>
Milestone B	2Q / 01	1Q / 01
Developmental Testing	3Q / 02	1Q / 03
Operational Assessment	3Q / 02	
Safety Confirmation	4Q / 02	2Q / 03
System Prod. Certification	4Q / 02	
Milestone C / FRP	4Q / 02	4Q / 03
First Unit Equipped	2Q / 04	4Q / 04

Developmental Testing



DT Summary

- Reliability
- Ballistics – firing tables and jump tests
- Platforms – hard stand, ground mount, earth box, vehicle
- Ammunition compatibility
- Adverse Environment
 - Hot, Cold, Icing
 - Salt fog
 - Mud – wet and dry
 - Sand/Dust – static and dynamic



System Safety

- DTC Safety Release
 - Amendment 1, 19 November 2001

- Safety Confirmation
- WSESRB Introduction



Operational Assessment

- OA
 - 3 ALGLs
 - NAG
 - ATC
 - May 2002





NAMMO & GDAS Presentations



GENERAL DYNAMICS
Armament Systems

GENERAL DYNAMICS
Canada

Nammo
NORDIC AMMUNITION COMPANY